

Serial No.: 10/797,369  
Art Unit: 2676

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- 1           1.       (Currently Amended) A method of generating contour lines from ~~row and~~  
2 ~~column~~ elevation data, the method comprising the steps of:
- 3               a)       selecting a first data point from the ~~row and column~~ elevation data  
4 ~~comprising a first state;~~
- 5               b)       setting the row and column data to an initial contour value, the row and  
6 column data comprising a first state;
- 7               **~~b) c)~~**   comparing a second data point with the first state for determining an  
8 existence of a contour line depending on a result from the step of comparing;
- 9               **~~e)~~**       determining an existence of a contour line;
- 10              d)       updating the first state to a next state, wherein the next state comprises  
11 a next row and column data, if the contour line exists;
- 12              e)       creating a portion of a contour line image, if the contour  
13 line exists;
- 14              f)       proceeding to a next data point; and
- 15              g)       repeating steps b) through ~~g)~~ f) for a next column or row.
- 1           2.       (Original)    The method of claim 1 wherein the step of proceeding  
2 comprises proceeding in a predetermined direction.
- 1           3.       (Original)    The invention of claim 2 wherein the step of proceeding  
2 in a predetermined direction comprises proceeding in predetermined row and column  
3 directions.
- 1           4.       (Original)    The method of claim 1 further comprising the step of  
2 selecting a contour line interval.
- 1           5.       (Original)    The method of claim 1 further comprising anti-aliasing  
2 the contour line image.

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1                   6.     (Original)     The method of claim 1 wherein the step of updating  
2 comprises determining if an elevation point row and column data exceeds a current row or  
3 column base elevation by a value greater than a contour interval.

1                   7.     (Currently Amended) The method of claim 1 wherein the step of  
2 updating comprises storing the next state in a memory.

1                   8.     (Original)     The method of claim 7 wherein the step of storing  
2 comprises storing the row and column base elevation.

1                   9.     (Original)     The method of claim 1 wherein the step of creating  
2 comprises drawing the portion of the contour line image.

1                   10.    (Original)     The method of claim 9 wherein the step of drawing  
2 comprises displaying the portion of the contour line image.

1                   11.    (Original)     The method of claim 1 wherein the state of creating and  
2 the step of repeating comprises creating an entire contour line image.

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1                   12. (Original)    A method of transforming input elevation data into a  
2 real-time contour plot image, the method comprising the steps of:  
3                   a)     selecting an ordering sequence;  
4                   b)     selecting a contour line interval;  
5                   c)     determining initial row and column base elevation values;  
6                   d)     selecting a first data point;  
7                   e)     determining whether a contour line point has been detected by  
8 comparing the row base elevation value or column base elevation value plus the contour  
9 interval to the elevation data;  
10                  f)     drawing a portion of a contour plot image;  
11                  g)     updating the row and column elevation values to a highest contour  
12 interval multiple less than a elevation data point;  
13                  h)     moving to a next data point; and  
14                  i)     repeating steps e) through h).

1                   13. (Original)    The method of claim 12 wherein the step of determining  
2 initial row and column base elevation values comprises selecting a contour elevation closest  
3 to but not exceeding the first elevation value in the row.

1                   14. (Original)    The method of claim 12 wherein the step of drawing  
2 and the step of repeating comprises drawing an entire contour line image.

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2                   15.   (Currently Amended) An apparatus for generating contour lines from  
3 row and column data, the apparatus comprising:  
4                   a first data point from the row and column data  
5 comprising a first state;  
6                   a means for comparing a second data point with the first  
7 state for determining an existence of a contour line depending on a result from the means for  
8 comparing;  
9                   ~~a means for determining an existence of a contour line;~~  
10                  a means for updating the first state to a next state, if the  
11 contour line exists;  
12                  a means for creating a portion of a contour line image, if the contour  
13 line exists;  
14                  a next data point for comparing with the next state by the means for  
15 comparing, the next state comprising a next row and column data; and  
16                  a means for drawing an entire contour line image from a plurality of  
17 portions of contour line images created by the means for creating.

1                   16.   (Original)   The apparatus of claim 15 wherein said means for  
2 creating comprises a display.

1                   17.   (Original)   The apparatus of claim 15 further comprising memory  
2 for storing the next state.

1                   18.   (Original)   The apparatus of claim 15 further comprising a means  
2 for anti-aliasing the entire contour line image.